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**NATIONAL ASSOCIATION  
of CORPORATION SCHOOLS**

**Bulletin**

25 Cents a Copy

\$2.00 For a Year

Volume III

February, 1916

**Association Activities**

**Building Men for American Industry**

*By E. M. HERR, President Westinghouse Elec. & Mfg. Co.*

**An Economic Analysis of American  
Industry**

*By FRANK A. VANDERLIP, President The National City Bank of New York*

**Educational Work at the Warner & Swasey  
Company**

*By KENNETH W. REED*

**Carnegie Institute to Train Salesmen**

**Connecticut Trade Shop Schools**

**Young and Old Use Gary School**

*By HENRY M. HYDE*

**PUBLISHED BY ORDER OF THE  
EXECUTIVE COMMITTEE**

# The National Association of Corporation Schools

Headquarters, Irving Place and 15th Street, New York City

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## Objects

Corporations are realizing more and more the importance of education in the efficient management of their business. The Company school has been sufficiently tried out as a method of increasing efficiency to warrant its continuance as an industrial factor.

The National Association of Corporation Schools aims to render new corporation schools successful from the start by warning them against the pitfalls into which others have fallen, and to provide a forum where corporation school officers may interchange experiences. The control is vested entirely in the member corporations, thus admitting only so much of theory and extraneous activities as the corporations themselves feel will be beneficial and will return dividends on their investment in time and membership fees.

A central office is maintained where information is gathered, arranged and classified regarding every phase of industrial education. This is available to all corporations, companies, firms or individuals who now maintain or desire to institute educational courses upon becoming members of the Association.

## Functions

The functions of the Association are threefold: to develop the efficiency of the individual employee; to increase efficiency in industry; to have the courses in established educational institutions modified to meet more fully the needs of industry.

## Membership

### *From the Constitution—Article III.*

SECTION 1.—Members shall be divided into three classes: Class A (Company Members) Class B (Members), Class C (Associate Members).

SECTION 2.—Class A members shall be commercial, industrial, transportation or governmental organizations, whether under corporation, firm or individual ownership, which now are or may be interested in the education of their employees. They shall be entitled, through their properly accredited representatives, to attend all meetings of the Association, to vote and to hold office.

SECTION 3.—Class B members shall be officers, managers or instructors of schools conducted by corporations that are Class A members. They shall be entitled to hold office and attend all general meetings of the Association.

SECTION 4.—Class C members shall be those not eligible for membership in Class A or Class B who are in sympathy with the objects of the Association.

## Dues

### *From the Constitution—Article VII.*

SECTION 1.—The annual dues of Class A members shall be \$50.00.

SECTION 2.—The annual dues of Class B members shall be \$5.00 and the annual dues of Class C members shall be \$10.00.

SECTION 3.—All dues shall be payable in advance and shall cover the calendar year. Any members in arrears for three months shall be dropped by the Executive Committee unless in its judgment sufficient reasons exist for continuing members on the roll.

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# The National Association of Corporation Schools

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## Bulletin

Published by Order of the Executive Committee  
Edited by F. C. Henderschott, Executive Secretary

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No. 2

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### **DEVELOPING A BROADER EDUCATIONAL SYSTEM**

It is not uncommon for the daily press to feature the sayings of some professor in relation to the educational system of our country, especially if the theory advanced contains an element of sensation. A recent instance is an address delivered by Professor Scott Nearing, formerly of the University of Pennsylvania, given before the City Club of New York. Professor Nearing stated in part:

Endowed colleges are among the greatest sinners against free speech, so that the entire school system must be made and kept public with no trace of private control if public opinion of the right kind is to be developed.

To the average mind the thought that free speech can be suppressed in the United States in this day is inconceivable. What the educational system of this country really needs is not greater freedom but some plan which will keep the boy and the girl in school until they are grounded with the fundamentals of education, and, until that condition is possible, to provide substitutes by which education may be secured by those who leave school anywhere from the sixth grade to the point where their education would be fairly complete.

Professor Nearing is quoted as having flayed monopoly control of economic interests and expressed the fear that such interests "through material power may become a dominant factor in society and thus control our educational institutions." As all institutions of learning, either public or private, are directly or indirectly sustained by either industry or agriculture, the two great original sources of wealth, the professor's fears would seem groundless.

At the present time less than 10 per cent of American boys and girls are receiving high school education, less than 60 per cent complete the grammar school grades and less than 4 per cent receive academic training. Here is a condition and not a theory. It is to remedy this condition that the cry for a broader

and better educational system has arisen. Considerable progress has been made and almost innumerable experiments are being tried. In some states, especially Wisconsin and Pennsylvania, there are twenty-five to fifty thousand more children of school age in the public schools than would have been in the educational system of these states five years ago.

Municipalities, the states and the nation are all directing thought to the end that better and broader education shall prevail. The industrial corporations have also instituted what is known as the corporation school. It is not thought to control the public schools nor the many private institutions of learning. If American industry is to compete successfully with that of other nations American workmen must be trained to at least as high a standard as prevails in competing nations. Other things being equal the trained mind always wins over the untrained mind. When the educational system of the United States is sufficiently comprehensive to insure to every American youth an education equivalent to that of the high school with proper specializing branches for agriculture, industry, and the professions, it will then be time to condemn the industrial institutions that are co-operating to this end.

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### **NOVEL PROBLEMS OF THE NATION'S INDUSTRY**

Before a recent convention of the American Association of Woolen and Worsted Manufacturers, Mr. Frank A. Vanderlip, President of the National City Bank of New York, delivered an address. This address has been published by the Alexander Hamilton Institute as collateral reading to its course dealing with the sub-divisions of industrial life; knowledge an executive must possess to insure a full realization of the possibilities of his position. This address is largely reproduced in this issue of the BULLETIN.

The omitted parts of the address deal with the political division rather than the industrial, except as politics relate to, and influence, business.

Mr. Vanderlip first calls attention to the fact that present conditions are extraordinary and therefore are not comparable to periods in history. To quote Mr. Vanderlip, "Precedents go for naught. Experience of the past we cannot feel sure is any safe guide to the future." Secondly, Mr. Vanderlip calls attention to the fact that "after several years of light trade and slack industry, of dormant enterprise and small ambition for

expansion, the business world is seeing signs of better times." And there is distrust of the new prosperity as it has found its origin at least in part in the calamities of other peoples.

Further, it is pointed out that there is no definite information upon which to base an opinion as to when the war will end. Our prosperity, however, may end before the war is concluded. "We know that possibly before it ends, foreign purchases in this market may have to be curtailed because the means of payment are lacking."

Passing from his statement of conditions which have led to a greater measure of prosperity in the United States Mr. Vanderlip emphasizes a second obvious fact. "If we are to have important and growing commercial relations with the rest of the world, we must provide the rest of the world with the means to pay for products." Referring to present industrial conditions the speaker pointed out: "The wheels have been started; the inertia has been overcome. Today the business machine is running at a speed and with a power never exceeded."

It is the belief of Mr. Vanderlip that we may for some time look forward to a tremendous volume of business. "Our problem now is to get ourselves independent of the war business as quickly as possible, which with the exercise of intelligence and co-operation we can do." It is interesting to analyse further and discover just what shall be embraced "in the exercise of intelligence and co-operation." Intelligent action would seem to require that the American worker must be trained to an efficiency the equal at least of that obtained, through training, by workers of other nations. The belief that Mr. Vanderlip had this thought in mind is justified by the following extract taken from a book which he wrote some years ago:

"The enlarged scope of business is demanding better trained men. I believe that we have failed utterly to grasp the problem of the relation between education and our industrial development and prosperity. The welfare of the people and the position which our country is to maintain among nations both depend upon no single thing more than on the recognition of the changed conditions in industry by our educators. I believe we need to establish for the numbers of the army of the industrial workers a means which will aid them to gain a supplementary education along lines particularly adapted to their requirements. The success of the future will be for better trained men."

In addition to the statement that there must be "exercise of intelligence," Mr. Vanderlip also pointed out that there must be

"co-operation." Co-operation is attained by individual units working together for results which will prove mutually helpful. The National Association of Corporation Schools is a co-operative organization. Here successes and failures in the field of industrial education are discussed and compared and utilized or avoided as the case may require.

In summarizing industrial conditions as they exist today in the United States Mr. Vanderlip has pointed out: "The war is not going to prove a total loss to the industries of Europe" and adds, "Why should we not come to see that a unity of purpose in our industrial life will be needed to meet the competition of the future, and that whatever contributes to effective industrial organization, to cheap production, to elimination of waste, will eventually work to the good of all the people."

Here is a new definition of conditions, coupled with a clear, concise statement of belief that if the United States is to gain and hold industrial supremacy among all the nations, certain definite action must be had. Perhaps the most important factor in such action is broader and better industrial training.

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#### **BUSINESS RESPONDING TO EDUCATION'S CALL**

One of the encouraging developments, from an educational viewpoint, is the increasing tendency on the part of business men to co-operate with the institutions of learning. A case in point is an address recently delivered in the State Trade Education Shop at Bridgeport, Connecticut, by Dr. D. L. Ireton, the Class "A" representative in our Association of The National Lead Company.

To make the talk more to the point and to prove his statements Dr. Ireton had with him a traveling laboratory and samples of lead in its various stages of refinement, from the rough ore as it is taken from the mines to the finished product as is used in the best paints.

These samples were used by Dr. Ireton to illustrate his talk in which he told how the lead ore came from the mines and was pulverized and boiled to extract the impurities such as earth, gold, silver and other minerals from the ore.

The more knowledge the boy or girl possesses of the materials which enter into industry the better they are equipped to intelligently carry on their work. Business has too long neglected the institutions of learning. Today there is almost universal cry on behalf of such institutions for assistance from the

business world and the cry is justified. Industry directly and indirectly supports all of our educational institutions and yet the two greatest sources of wealth, the factory and the farm, have been neglected from the standpoint of educational training.

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### **EDUCATIONAL REQUIREMENTS OF SPECIALIZED INDUSTRY**

The beginning of a new and much desired educational development is chronicled in a recent issue of *The Wingfoot Clan*, the house organ of the Goodyear Rubber Company. In response to numerous inquiries the Akron Municipal University will offer this winter a number of classes as a part of its extension work for the benefit of teachers, employed persons and citizens in general, who wish to take up college work. Among the classes organized are mathematics, engineering, chemistry, history, literature, applied psychology and the modern languages. Arrangements have been made whereby additional subjects can be offered if there is demand.

The courses which are offered are good. However, before the Akron Municipal University can fulfill its larger mission it must develop a course designed to cover fully and thoroughly the rubber industry. Akron is the "rubber city" of America and it should be possible for all engaged in this branch of business as well as the youths of Akron, many of whom will find employment in the big rubber factories of that city, to specialize and acquire complete knowledge of this branch of industry—how rubber is grown, gathered, transported, marketed and made up into the many articles of manufacture.

It might be desirable to make it possible for the youths of Akron to secure some of this knowledge in the high schools of that city. Surely all knowledge should be available through the Akron University.

The plan must eventually be extended beyond Akron. It should be general among the universities serving communities where specialized industry is to be found. For example, at Detroit the Cass Technical High School should be enlarged to embrace courses covering the manufacture of automobiles, or if this is found to be impractical, a university should be established through which this information could be gained. Wherever specialized industry is to be found a university ought to be developed to serve the industry.



**WOMAN IN EDUCATION**

There are 12,000 conspicuous educational positions listed in the official directory for 1915-16, compiled by J. O. Knott, and just issued by the United States Bureau of Education. Of these positions 2,500 are filled by women.

There are women who are college presidents, state superintendents, directors of industrial training, heads of departments of education in colleges and universities, directors of schools for afflicted and exceptional children, and librarians.

Twenty-four of the 622 colleges and universities listed in the directory are presided over by women. Chief among these are: Bryn Mawr, Pennsylvania, Miss M. Carey Thomas, president; Barnard College, New York, Virginia C. Gildersleeve, dean; Wellesley College, Massachusetts, Ellen F. Pendleton, president; Mount Holyoke, Massachusetts, Mary E. Woolley, president. Missouri and Virginia each have three colleges presided over by women.

Of the nearly 3,000 county superintendents in the United States, 508 are women. The tendency to fill this position with women is almost wholly confined to the West. One state, Montana, has not even one man as county superintendent. Wyoming has only two. The other states that rank high in this particular are: California, with 23; Colorado, with 49; Idaho, with 25 (out of a total of 33); Iowa, with 52; Kansas, with 49; Nebraska, with 46; and South Dakota, with 34. Kentucky is the only Southern state that favors women for this office. There are 26 of them on the county list of superintendents. Missouri has 15 and Oregon but one. The city superintendents of schools number 26.

Seventy institutions for the blind are listed in the directory. Women superintend 15 of these. The 75 state schools for the deaf that are given have but 10 women superintendents; but of the 22 private institutions of the same character 16 are under direction of women.

The directory gives 41 state institutions for feeble-minded children, all but two of which are under male supervision; but out of 31 private institutions of the sort women superintend 20.

Fourteen of the 86 directors of industrial schools are women, and 48 out of 200 schools of art are under women. All of the 79 kindergarten training schools are in charge of women. This is largely true of the public and society libraries throughout the country. The directory lists 1,300 of these, with 1,075 wom-



en librarians, representing all sections of the country. The selection of women for this work is not confined to any section of the country.

Among presidents and deans of professional schools women are conspicuous for their absence. The schools of law and medicine number one woman each as its head. The other professional schools are directed solely by men.

Of the 33 officers of the United States Bureau of Education 11 are women.

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### NEW MEMBERS

Since the last membership statement appeared in the BULLETIN the following new members have been received:

#### Class "A"

The Cleveland-Cliffs Iron Company,  
Ishpeming, Mich.....Mr. W. H. Moulton  
Eastman Kodak Company,  
Rochester, N. Y.....Mr. F. W. Lovejoy  
International Harvester Company of New Jersey,  
Chicago, Ill.....Mr. G. A. Ranney  
The Bell Telephone Company of Pennsylvania,  
Philadelphia, Pa.....Mr. J. C. Lynch  
Standard Oil Company of New York,  
New York, N. Y.....Mr. E. S. Moffett

#### Class "B"

Mr. W. H. Eyler, Goodyear Tire & Rubber Company, Akron, O.  
Mr. Carl B. Auel, Westinghouse Electric & Manufacturing Company, Wilkinsburg, Pa.  
Mr. Carl S. Coler, Casino Technical Night School, East Pittsburgh, Pa.

#### Class "C"

Mr. J. M. Watters, West Tennessee State Normal School, Memphis, Tenn.

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### BOOKS RECEIVED

"Standard Short Course for Evening Schools," by William E. Chancellor. Published by American Book Company.

"Eldridge's Business Speller," by Edward H. Eldridge, Ph.D. Published by American Book Company.

"Fritz-Eldridge Expert Typewriting," by Rose L. Fritz and

E. H. Eldridge, Ph.D. Published by American Book Company.

"Commercial Geography," by Gannett-Garrison-Hooston. Published by American Book Company.

"Writing an Advertisement," by S. Roland Hall. Published by Houghton-Mifflin Company.

"Efficient Living," by Edward Earle Purinton. Published by Robert M. McBride & Company.

"Hygiene for the Worker," by William H. Tolman, Ph.D. Published by American Book Company.

"Essentials of Business Arithmetic," by George H. Van Tuyl. Published by American Book Company.

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### **SCHOOL SURVEYS SHOW INFLUENCE**

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#### **Industrial Progress Dependent Upon Education of the Workers**

International industrial competition and the disclosures that industrial progress is dependent upon education, have been the motive for school surveys abroad, according to a bulletin of the United States Bureau of Education on "Foreign Educational Surveys."

The bulletin calls attention to the fact that the American survey movement and the efforts to reorganize American schools in industrial and vocational ways were coincident with a realization by the people of the United States of the wonderful progress made by Germany in vocational education and that nation's consequent advance in international industry and commerce.

"The purpose of an educational survey," declares the bulletin, "is to bring about a more economic use of money and equipment, and a better adaptation of educational agencies to educational needs."

"The scope of the foreign survey is generally wider and looks less to local conditions than the American survey, so the bulletin says. The foreign survey differs also from the American in that it is always made under government auspices. The findings therefore carry with them the weight of government authority. "In the schools these findings are conclusive and by the general public they are received with deference."

The bulletin describes surveys in eleven different foreign countries. Of English surveys it is declared: "England has been especially fortunate in securing the services of her ablest public men on the educational commissions and in generally having as chairman the ablest and most eminent men of the nation."

## **ASSOCIATION ACTIVITIES**

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### **COMMITTEE ON EDUCATIONAL COURSES FOR UNSKILLED LABOR ANNOUNCED—REPORT OF SUB-COMMITTEE ON REVISION OF CONSTITUTION RECEIVED BUT ACTION THEREON DEFERRED UNTIL THE FEBRUARY MEETING**

At the meeting of the Executive Committee held in New York on January 4th, President McLeod announced the appointment of a new Committee to take up the problem of educational courses for unskilled laborers with special reference to foreigners who do not speak the English language. The committee as appointed is composed of the following members:

- Mr. J. E. Banks, Chairman, American Bridge Company;
- Mr. G. Guy Via, Newport News Shipbuilding and Dry Dock Company;
- Mr. L. T. Warner, The Warner Brothers Company;
- Mr. Carl S. Coler, Casino Technical Night School;
- Mr. N. F. S. Russell, United States Cast Iron Pipe & Foundry Company.

Chairman Banks announces that the Committee will hold its first meeting at an early date at the offices of the United States Cast Iron Pipe and Foundry Company, Burlington, New Jersey.

### **Industrial Educational Standards**

Mr. Jacob H. Yoder, the new member of the Executive Committee, representing the Pennsylvania Railroad Company, at the last meeting of the Executive Committee made the statement that he believed the day to be not far distant when all educational courses, industrial in character, would be measured as to their value and correctness by the standards of The National Association of Corporation Schools. The suggestion was communicated, through the Executive Secretary's Office, to all of the chairmen of the sub-committees of our Association as it is believed the work of the sub-committees has progressed to a point where it is possible to consider the formation of such standards. More especially is this true in regard to office work schools and trade apprenticeship schools. It is hoped that our association through its sub-committees will ultimately be able to standardize what should be given in industrial educational courses and the manner in which such information should be taught.

The development of the work of our sub-committees may also indicate the desirability to standardize what should be taught on health subjects and what should be considered basic in the formation of employment bureaus and upon other subjects so closely allied to the training department that they must be carefully considered.

### **Class "A" Membership**

Our Association continues to enjoy a healthy and steady growth in Class "A" members. Since October 25th twenty-three new memberships of this Class have been received. These memberships have been from large and representative institutions.

A list has been compiled which embraces all the prospective Class "A" members in the United States. This list will be circularized at least three times during the present year. Experience indicates that a period of from six months to two years usually elapses from the time soliciting is commenced before the application for membership is received.

There are many industrial institutions which should be co-operating with our Association in the work that has been undertaken. Bringing to the attention of these institutions the importance of the problem of better education for the American youth, with special reference to industrial features, will undoubtedly stimulate Class "A" membership, when these industrial institutions decide to inaugurate training courses on behalf of their employees.

### **Direct and Indirect Benefits**

Our Association must be numbered among the many organizations which cannot show all of the benefits of membership through direct returns. Industrial institutions, through Class "A" membership, are entitled to the bound volumes of the Proceedings of the annual conventions which our Association holds and also to twenty copies of the monthly Bulletins. Members are also entitled to advance reports of the Association's sub-committees and to have a voice in how the activities of the Association shall be conducted. In fact complete authority is vested in the Class "A" membership but there are indirect benefits of even greater value. Since the establishment of our Association the subject of industrial education has been considered in almost every city and hamlet in the United States. The universities, colleges, public high and elementary schools, private and correspondence schools, in fact every established institution of learning has felt and, in some degree, been influenced by the work

which our Association is carrying on. The Executive Secretary's Office is in receipt of an increasing number of inquiries for further information on subjects discussed at the annual conventions. There is a growing demand for text books which can be used in teaching industrial educational courses. Thirty-two of the larger colleges and universities and twenty-five of the larger public libraries have purchased the annual Proceedings of our Association. The number of such institutions purchasing the Proceedings of our annual conventions is constantly increasing. The monthly BULLETIN of our Association is now received by all of the larger universities and colleges and the larger public libraries and most of the daily newspapers of the larger cities throughout the United States. Several of the private schools and many educators are also purchasers of the Proceedings and subscribers to the Association's BULLETIN.

### **Interest in Forthcoming Annual Convention**

President McLeod and Mr. Dooley of the Executive Committee submitted to the Executive Committee at its January meeting an informal report of progress for the local convention committee in charge of the fourth annual convention to be held in Pittsburgh, May 30th, 31st, June 1st and 2d. Much interest is being manifested in the convention to be held this year. Pittsburgh is an ideal place for our Association's convention. The headquarters will be at the Hotel Shenley, which is situated midway between the Carnegie Institute of Technology and the University of Pittsburgh. Both of these institutions are taking an active interest in the preparations for the convention. Dr. Davidson, Superintendent of Schools of Pittsburgh, is also co-operating. Every indication at this time is for the largest and most enthusiastic convention our Association has yet held.

### **The Second Pan-American Congress**

The Second Pan-American Scientific Congress convened in Washington on December 27th and continued in session until January 8th. The convention was composed of delegates representing the twenty-one South and Central American Republics and representatives from the United States. Education was an important feature of the discussions. Past President Arthur Williams, Secretary Lee Galloway and Mr. E. H. Fish, Chairman of the Association's Sub-Committee on Public Education and F. C. Henderschott, Executive Secretary, attended the Congress as delegates from our Association and each delivered an

address before the Congress. The next session of the Congress will be held at Lima, Peru, in the year 1921.

### **Bound Volumes of the Bulletin**

Beginning with the September, 1914, issue of the Association's monthly BULLETIN, the Executive Committee ordered one hundred copies reserved to be bound into volumes and sold. The first volume has now been issued. It consists of the monthly issues from September, 1914, to December, 1915, both inclusive. The volume is substantially bound in cloth and can be purchased for \$2.50.

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## **COLUMBIA UNIVERSITY OPENS BUSINESS SCHOOL**

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### **New Department to Rank with Those of Law, Medicine, Practical Arts and Engineering**

A resolution calling for the establishment at Columbia University of a School of Business has been adopted by the trustees. This step has been taken as a sequel to the opening last year of special business courses for the seniors.

Plans for this school have been under consideration for some time. The School of Business will be organized on the same plane as the Schools of Law, Medicine, Engineering, Architecture, Education, Practical Arts, and Journalism, under the direction of a Director and an Administrative Board.

Matriculated students will be required to have completed two years in Columbia College or in some other college of equivalent standing. Non-matriculated students will be accepted on proof of fitness to follow the course of instruction. Men and women will be admitted to the school on equal terms.

The instruction to be given in the school will include accounting, finance, including the banking and bond business; the business aspects of manufacturing and transportation, real estate and insurance, foreign trade, secretarial work, the work of consular and diplomatic officers, and other forms of public service. The course of study will be three years and will lead to an appropriate degree, the form and title of which remain to be decided. For the benefit of those students of business who earn their own living, provision will be made to give instruction in the evening.

Newcomb Carlton, President of the Western Union Telegraph Company, has been elected a trustee of the university to fill the vacancy caused by the death of William Douglas Sloane.



## **BUILDING MEN FOR AMERICAN INDUSTRY**

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**One of the Leading Business Men of the United States Defines  
the Problem of Hiring and Training Workers to the End  
That the Worker and Industry Shall Both Profit**

E. M. HERR,

*President of the Westinghouse Electric and Manufacturing Co.*

(Abstract of an address delivered before the Pittsburgh Industrial Development Commission.)

We who are living and working in industrial Pittsburgh are part of one of the greatest centers of industry in the world. These industries were originally built up from small beginnings by men of power and resource, who controlled and developed the men associated with them through personal contact and direct and intimate knowledge. With the great growth and expansion of these activities came a necessarily less and less intimate contact between the responsible heads of these great organizations and those working with them and under their general direction. Later the industries themselves grew beyond the ability of one man to manage in detail and became divided into departments and sections, each with its responsible head and corps of assistants.

Success required co-operation and coherence in the organization and it is not too much to say that the ability to attain this in an organization is a good measure of its success.

This growth and expansion inevitably resulted in a loss in individuality among the workers. To those outside and even to a large extent to those inside these great industries the company, the corporation, the smooth-working organization, were apt to be considered the great factors in industry, while the individual man elements were overlooked and neglected.

When we stop to consider and analyze the organization of a great industry, it is, of course, quite clear that it is only by the proper co-operation and organization of men of power and ability, both in executives and workmen of all kinds, that success is attained. This granted, are we enough concerned in building up into able, strong, forceful workers the young men, and women, too, who in early life join our industries?

### **Human Efficiency Is Low**

In the last analysis, it is the man behind the gun who counts, no matter what is his position, be it high or low. Let us, there-

fore, consider what facilities, what incentive, what inspiration, what outlook, is given for individual improvement and growth.

We apply reserves and depreciation to our buildings and machinery that they may be kept up and developed to a better and better efficiency. We should apply the same principles to our men, only on a broader and more liberal basis because of the far greater asset value of the human element than the material to the ultimate success.

I believe the truth and value of the importance of man-building is being recognized by increasing numbers of our industrial managers, and much in the way of improvements in matters of safety of employes, consideration of physical fatigue, and healthful surroundings is being provided.

Professor Scott, of Yale, who has had much to do with the training of technical men, says: "A study of individuals in most organizations will reveal the fact that human efficiency is very low; that there is a lack of initiative; that there is misapplied effort; that time is lost and little is accomplished through indisposition and lack of incentive. A little better judgment, a little better ability, a little higher intelligence would double or treble the productiveness of most men. How to bring out this, how to develop the individual and improve the environment which surrounds him is the large problem in industry."

### **Encourage and Train Men to Grow**

The low efficiency in men generally, as found by Professor Scott, cannot be raised appreciably by doing things only in the nature of general welfare work or for the encouragement and greater comfort of the individual, good and necessary as is work of this kind. To measure up to the responsibilities and opportunities before us in the line of man-building, we must not only do the things already mentioned, but also, and what is more important and more difficult, encourage and train men to grow, by willingly undertaking to overcome difficulties.

Who is competent and measures up to the ability required to shoulder great responsibilities and execute difficult duties? Only men thoroughly trained and schooled in gradually overcoming greater and greater obstacles, and who have in this way grown strong, are able to take up burdens larger than before and carry them through to a successful conclusion.

Is the necessary training of our boys and young men in our different industrial and commercial businesses being intelligently provided and adequately administered to bring the result just

mentioned, viz.: that of providing a sufficient supply of properly trained men to carry on in the most effective way the great responsibilities we as a nation are now required to assume? Before attempting to answer this question, it would be well to inquire what must be included in the training that is necessary to enable great responsibilities to be borne and great duties performed?

Great knowledge and learning will not alone suffice, for, if they would, we would see the great scholars bearing the greatest responsibilities. History shows us that its greatest men were generally not men of unusual erudition, or if they were, other great qualities of mind and character were present to a more remarkable extent.

Experience and a broad contact with affairs is not all that is required, for many men of the widest experience and who have been in touch with world-wide affairs are ineffective and almost impotent in taking up great responsibilities depending upon their own efforts and decisions.

#### **Qualities Which Insure Success**

The men who do great deeds are those who have been again and again tried in the stress and strain of hardships and difficulties perhaps in an entirely inconspicuous way but who have worked through, never shirking, and have willingly taken up greater and greater burdens as they came to their hands, being most concerned not with the immediate rewards to be gained but with the feeling that progress was being made in the work given to their hands and that they had succeeded in their immediate task with the result that their character, knowledge, training, and, more important still, their courage and tenacity were strengthened for overcoming still greater difficulties and bearing more and larger responsibilities.

It is, I believe, rare that the individual, while going through this process of training and development which I like to call "Man-Building," is aware of the result of his efforts, but his innate strength of character, tenacity of purpose, and courage carry him through, and incidentally and generally unconsciously he grows in strength and ability.

So important and necessary is this discipline in overcoming difficulties that I am bringing this broad subject of "Man-Building," or the proper training of those who are under our direction in any way, to your particular attention.

This is not a subject for teachers or professional trainers of youth only but vitally concerns every business man, no matter

what his line or how small his activities. To-day no business is so small that one individual does it all, and even if a few clerks or salesmen only are employed, their training and development should be of great concern to their employer, who needs real men in positions of trust and must help in their upbuilding. They must, or at least they should, be trained so that as positions of more responsibility arise men to take them up can be found among those already employed and who have a more or less complete knowledge of the business.

### **Technical Training Not Enough**

Do not make the mistake of thinking the knowledge of the business is the important thing in determining the training of the employe. His fitness to grow depends much more on his ability to do things well whatever the task, and also on his general character and trustworthiness. With these qualities developed, he can easily get acquainted with any required business detail.

Are we arranging for the kind of training that will properly bring about this kind of development in our employes or are we mere opportunities striving to get the most out of them to-day and trusting to chance that we may do as well or better to-morrow?

Much effort is wasted and many good men fail to properly develop by persevering, possibly in a most admirable manner, in positions for which they are unfit. If they are placed in their right fields of work, their entire energies would be used to attain higher degrees of perfection instead of hunting their special places through repeated failures. Men of good qualities are too scarce to permit of a continuance of this wasteful practice. We must see to it that the foundation upon which we are to build is properly laid out and is the kind that will support the superstructure, or our building will be in vain.

No more important or helpful work toward better results from a number of employes can be done than to stimulate in all those who handle men, a keen realization of the importance of training and developing those under their charge along right lines.

Gradually encouraging men to undertake more and more difficult work, leaving them to work out the difficulties, but at the same time directing and guiding them in a way not too helpful, is good and beneficial. Helping in the wrong way, that is, to the extent of practically doing the task for the man, only weakens him, and instead of his being strengthened and benefited by the discipline and exertion of overcoming the obstacle in his

path, he is actually left by your ill-advised help a weaker and less able member of the organization.

### **Teach Appreciation of the Ultimate Reward**

Train men to work for the satisfaction of accomplishment rather than the expectation of immediate reward. They can be sure of reward, and a rich one will surely come to him who can and does excel his fellows in doing things, no matter how burdensome or onerous, provided they are worthy, and especially if such excellence is in work or methods more difficult than usually encountered. The reward may not come when expected—it may even be delayed until the worker feels great discouragement and can see no prospect of the recognition and reward he knows he has justly earned.

Here courage and steadfastness are required, for the road seems dark, and progress and reward not even in prospect. Being steadfast under these conditions is in itself discipline and helpful toward the highest attainment, and one is surely building for the highest manhood who can attain to it.

In addition to this, experience shows that reward for unusual and successful efforts must come and if deferred, as it often is by uncontrollable circumstances, it will ultimately be paid with interest well compounded.

We have now in this country, I believe, a most remarkable opportunity for industrial and commercial development. What the grasping of this opportunity requires is a larger number of men well trained in our various lines. Have we these men available? Have we been building them for our country's future needs? If not, their development is now of the most vital importance. We can no longer depend upon the very wasteful and inefficient methods of the haphazard development of young men employed without regard to their capacity to grow and develop along the lines of their work. Too many under such a lack of system must necessarily fail. We know the standards required in industry and commerce and must now address ourselves to systematically providing for first judging the capabilities of our people and second, providing for a thorough plan of developing those thus selected along the lines of their best capabilities. This means that every manager, superintendent and foreman becomes a builder of men to the extent that the standards of performance are set clearly before them, their degree of accomplishment frequently and frankly checked and the records made shown them with proper encouragement, when due. When this is done they



can be trusted to finish the job and to work out their own structure of manhood and attainment.

### **Development of the Westinghouse Course**

The Westinghouse Electric and Manufacturing Company formerly pursued the haphazard method in its course in shop experience for men of a technical education. This course was offered to almost any young college graduate, the company's attitude being one of accommodation, and was followed by indifference or neglect of the progress and special capabilities of the young man. To-day this course has many specific branches of training. The whole may be truly said to be a system designed and operated to find men and train them for each and every department of the company's activities.

Realizing that the selection of young men is of as much or more importance than their actual training, or, in other words, the foundation is of more importance than the superstructure, we are conducting a well organized and systematic campaign among the students about to graduate in the engineering courses of our principal colleges and technical schools and in this way selecting those thought to be best fitted for the peculiar needs of our business. This kind of selection is also being carried into other ranks of labor, but as yet imperfectly, with, however, a full recognition of its value and importance.

The development of man-building in an organization is necessarily slow and filled with difficulties. Its importance is great, and any organization which cannot practically perpetuate itself internally is weak and in an unsafe position.

It must be recognized, however, that the young men of to-day reach an industry later in life than did the generation preceding us. They have been in school or college and there received a training which, supplemented and developed by proper contact with the older men of more practical experience, should enable them to develop strongly and rapidly. This period of development is necessary, however, and managers must recognize it in order to get results.

### **ARE YOU DESTINED TO SUCCEED**

"If you want to know whether you are destined to be a success or failure in life, you can easily find out. The test is simple and infallible. Are you able to save money? If not, drop out. You will lose. You may not think it, but you will lose as sure as you live. The seed of success is not in you."—James J. Hill.



## **AN ECONOMIC ANALYSIS OF AMERICAN INDUSTRIAL CONDITIONS**

### **A Plea for Constructive Thought in Business and Co-operative Action That the Larger Measure of Results May Be Realized**

BY FRANK A. VANDERLIP

(An address delivered before the American Association of Woolen and Worsted Manufacturers and published as Collateral Reading to the Alexander Hamilton Institute's Modern Business Course.)

We are in a wonderful period of the world's affairs. The times are so extraordinary that it is difficult to feel certain enough of one's bearings to attempt to speak with any authority even about the immediate conditions. When it comes to an attempt at gauging the future, the prophet faces peculiar difficulties; for in many ways we seem to have cut loose from old moorings. Precedents go for naught. Experience of the past we cannot feel sure is any safe guide to the future.

After several years of light trade and slack industry, of dormant enterprise and of small ambition for expansion, the business world is seeing signs of better times. We have been none too sure, however, of the character of these signs. We have distrusted the prosperity that seems to spring from calamity to other peoples. It has been an evident fact that much of this new prosperity, which is quickening many branches of industry, is related directly or indirectly to the war.

We know nothing of when the war will end, and nothing of how long this special demand will continue. We know that possibly before it ends, foreign purchases in this market may have to be curtailed because the means of payment are lacking.

#### **An Erroneous Theory**

In some quarters there is an easy-going optimism which seems to believe that these enormous purchases will go on somehow because the chief buyers must have the goods. Upon that theory some sections of the country declined to take any share of the recent loan, made to stabilize the exchanges, even though those same sections were vitally interested in the exportation of products. They even indulged in criticism of those who did participate, chiding them for making investments abroad, although every dollar of the loan was to be expended in this country.

There is a class of business men whose concept of foreign

trade seems not to be broader than their rule of cash at the dock! They seem to feel that foreigners must buy from us, and that we have only to fix the terms and see that we get cash in hand before we ship.

That theory of imperative purchases is erroneous. No matter how much an individual or a country may need to buy, neither an individual nor a country can buy unless the means can be found to pay. Payment means something more than merely giving mental assent to a purchase.

### **Paying for Foreign Purchases**

I know of but three ways in which a foreign purchase may be paid for. The obvious way is to pay for it in gold, but of course very little can be paid for in that manner. The ordinary way is to pay for it by exchange credits, created by the sale of products, or, under special stress, by the sale of foreign securities and other forms of investment already existing outside the country which is making purchases. The third way is by effecting new credits through loans.

All that seems a very simple and trite statement, but we should keep it quite clearly in mind. We can only be paid for our goods through the shipment of gold; by means of exchange made through the purchase by us of products or securities; or, lastly, by making loans to the purchaser.

When you have passed beyond the use of credit, it means the transfer of property of some kind, and when you come to inventory the property of a country you find that little of it can be transferred across the ocean. You cannot move the lands or structures; you cannot afford to move any of the productive equipment; you cannot advantageously transfer the securities which represent interests in domestic corporations, for they are all subject to home taxation, and hence are not so good as the obligations of Governments themselves.

If we are to have important and growing commercial relations with the rest of the world, we must provide the rest of the world with the means of paying for products. We can only make this possible by buying what they have to sell us, which is products, securities or their own credit obligations.

### **The Present Industrial Condition**

A great stimulus to the industries of this country has been the war. The wheels have been started; the dead inertia has been overcome. To-day the business machine is running at a speed and with a power never exceeded. On the one hand, the vast

foreign trade balance in our favor has given us an easy money situation that is unparalleled, while on the other, a crop of unexampled value has added to the stimulation. It seems reasonably clear, then, that we may for some time look forward to a tremendous volume of business. Our problem now is to get ourselves independent of the war business as quickly as possible, which, with the exercise of intelligence and co-operation, we can do.

Fortunately, this is a country of widely diversified resources. Its products and its industries are so well balanced that they are more nearly mutually supporting than those of any other country in the world. When we are doing the amount of construction which our national growth requires, we have good times generated within our borders with little help from abroad. That is a position that we want to get into now.

In the past, we have had to look to Europe for capital to finance every great movement in our development. Under present conditions we could not do that, and fortunately we have no need for doing it. There is capital available in this country to inaugurate enterprises that will employ every man in the country without a dollar's worth of war business.

If conditions can be created that will give confidence to capital, so that the owners of it will be disposed to invest it freely, both in internal development and in granting external credits which in turn react favorably upon our industries, we shall become quite independent of war orders.

There is no lack of capital, I believe, for all the needs of our domestic commerce, and an ample surplus to use in granting credits to other countries. We scarcely comprehend our own wealth. Give to investors confidence in the security and profitableness of the investments offered them, that they will put their full capital resources into active reproductive work, and the available total will meet any demands we can foresee.

There has been a demonstration in the world in the past fifteen months of the wonderful extent of credit when the people are aroused and in earnest. We have seen unheard-of sums raised with apparent ease. If Great Britain and Germany can each raise approximately six billion dollars in fifteen months, for war purposes, what could the United States do for industry, for its own progress, and to support the progress of the world in this time of universal calamity, if a spirit of unity and high purpose directed its action?

### **Our Unique Position**

The whole world is looking expectantly to the United States. This is the richest country in the world in liquid wealth and in equipment for the production of everything the world wants, either in war or peace. It has the instinct and experience of growth. We know how to expand. Our industries have practically doubled their output in ten years. And now we are the only great industrial nation at peace, and able to give our energies to production and to building up, while the rest of the world is wasting and tearing down. There ought not to be an idle man in the United States for years to come, and if we could put ourselves under a wise and benevolent despot, or, in other words, if we could have a good organization and a good understanding with ourselves, and work to a common purpose, there would not be one.

The war has brought the world to a standstill, and for the time we are the only country that can contribute to its progress. From every quarter appeals come to the United States for help. It is a new position and a new experience for us. We have been supplicants ourselves in the past, and we ought to know from our own history what an opportunity the undeveloped countries now offer to us. What would we be to-day if we had never had foreign capital to help us?

Our neighbors, the other countries of the Americas, have great stores of natural wealth and raw materials, which our factories can use. They in turn need capital, not in the form of money, but in the form of railways, warehouses, machinery and supplies of every kind, the making of which would help to keep our factories busy for years to come.

While a wise and benevolent despot might do some of the things I have outlined, and even much more, we cannot have a wise and benevolent despot, and, for reasons much more important than any material prosperity, we do not want one.

### **The Need of Wisdom**

What we could have, however, and what would accomplish all these things better than the wisdom and the benevolence of any human being who ever lived, would be wisdom and benevolence in the direction of our political affairs and in the conduct of our industrial and commercial life.

All this means that there is no royal and easy road to placing this country, its industry and its commerce, in the commanding position that is waiting for it. That road lies only along the

path of individual wisdom, individual co-operation and high-minded conduct. That does not mean on the part of somebody else; it means on the part of each of us.

In whatever measure we individually will be ruled by the high motives, the foresight, and the wisdom that we would hope for in an ideal, benevolent despot, in that measure we will have contributed to this country's progress and to the pre-eminence and solidity of its commerce and industry. In the measure in which we are narrow, selfish, individualistic, in the measure in which we are satisfied with immediate profits, and work neither for fair division with labor which we employ, nor toward fair relations with our competitors; in the measure in which we are lacking both in moral fibre in the conduct of our own business, and in sagacious statesmanship in our contributions to the political life of the nation—in that measure will we hold back and misdirect the future.

I believe there never was given to a people such opportunities as exist for the United States to-day. What we make of these opportunities lies in no hands but our own.

If the full responsibility of all this can be born into the minds of men like you, who are directing large affairs, and who, because of your position, contribute not only to shaping our industrial life, but also to the quality of our political thought; if the true responsibility of citizenship can be brought home to you, we shall have no need for benevolent despots.

But remember that a very small part of the responsibilities of citizenship lies in how we vote at the polls. The responsibilities lie way back of that. They demand that we act in our own business life in such a way that a political majority may not be misled, because of an occasional transgression in business life, to put shackles on all business.

The position, the prosperity, the influence of the United States for the next twenty-five years will be tremendously influenced and, indeed, almost determined, by the course we take in the next twenty-five months. To an unusual degree there will flow from the political business and individual decisions that we make in the next two years, consequences that will for many more years affect our destiny. There was seldom, if ever, needed in our political councils calmer minds, more farseeing statesmanship, more practical grasping of the essence of business life. In the conduct of business there has seldom, if ever before, been greater need for broad vision, for a fresh imagination that will

deal soundly and effectively with new opportunities of vast import.

### **Lessons Taught by the War**

The war is not going to prove a total loss to the industry of Europe. Some fundamental lessons of great importance have been learned. The efficiency of a central direction that has come to be little less than a vast experiment of State socialism is being tried, and the least that will come of that will be important lessons in co-operation and unity. Why should we not learn some of those lessons without paying the awful tax that has come with them to the belligerent nations? Why should we not come to see that a unity of purpose in our industrial life will be needed to meet the competition of the future, and that whatever contributes to effective industrial organization, to cheap production, to elimination of waste, will eventually work to the good of all the people? It is up to us. We, as a people, will get out of the future what we prove worthy of getting. I believe a nation never had such opportunity for service to the world, to mankind, to its own people, and for a service that will be accompanied by benefits and rewards to all. If there are misfortunes ahead of us, they will be of our own making. That there are tremendous opportunities ahead of us, if we are equal to grasping them and equal to discharging the responsibilities that go with them, there can be no doubt.

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### **INTERESTING ATTENDANCE FIGURES FOR CLEVELAND'S SCHOOLS**

By a recent report it is shown that of each 100 children who begin school in Cleveland, practically all remain to the age of 12. By 14, one in six has left. By 15, nearly half of them have gone. By 16, two-thirds have dropped out, and by 17, only one in five remains. "It appears from these figures," says the report, "that the compulsory attendance law is not well enforced with respect to children of the upper compulsory attendance ages."

On the other hand, Cleveland children get farther in school than they do in most other cities. Of every 100 who enter, practically all complete the fifth grade. By the time the seventh grade is reached, one in five has left. Nearly two-thirds reach the eighth grade. More than four in every ten enter the high school, and nearly one-half of these finish the course.



## **EDUCATIONAL WORK AT THE WARNER AND SWASEY COMPANY**

### **How an Apprentice System Established Thirty-five Years Ago Is Being Developed Into Comprehensive Educational Courses**

BY KENNETH W. REED

For thirty-five years apprentices have been trained for the machinist trade at the Warner & Swasey Company. These years have seen a large growth in the company, and consequently a constantly increasing opportunity for the apprentice boy. In November, 1911, there was added to the already thorough shop course a school by means of which it was hoped to still further aid the boy in his attempt to learn his trade.

Apprentices of former years have done a great deal toward the development of the company. About forty men who learned their trade here are still with us. The list includes journeymen, draftsmen, inspectors, foremen, heads of departments and executive officers. Among the titles held by former apprentices are those of Works Engineer, Superintendent, Assistant Superintendent, Head of the Estimating Department, Manager of a Sales Agency, Foreman of the Drawing Room, Chief Inspector and Employment Supervisor. Nor is it entirely within our own organization that former apprentices have proved their worth. The foremen, superintendents, managers and owners of some of the best known machine shops in Ohio received their early training under our apprentice system.

This system has undergone a continual change. From a position as helper to the more experienced journeyman and general errand boy, where he was welcome to what little knowledge he could pick up, the apprentice has earned a more definite place and a right to systematic training. Such training the company was able to give as new departments were added and a greater variety of work was undertaken. A plan was adopted which assured to each boy a chance to work in each department and on each class of work. The next step was taken four years ago when it was decided to start the Apprentice School.

#### **School at First Was an Experiment**

For the first year the school was largely an experiment. Attendance was not compulsory and while nearly all took advantage of it at the start, many lost interest and were permitted to drop their school work. Instruction was given during working

hours and the boys were paid for the time spent in the class room at their regular rate. The subjects taught during the first year were Arithmetic, Algebra, English and Mechanical Drawing. Boys entering upon their apprenticeship after the school was founded were required to attend the classes. This year, for the first time, all the boys in the school are those for whom the work is compulsory. With the start of the second year it was possible to outline a policy and a course of study which has undergone but little change since. The school has become an important part of the apprentice system.

### **The Apprentice Course**

The Apprentice Course consists of four years of 2,700 working hours each. The first six months, or 1,350 hours, constitute a trial period, at the end of which the boy may be dismissed or accepted. Applicants for admission must have completed a grammar school course or its equivalent and be between the ages of 17 and 21. Each week's schedule includes fifty-one hours of shop work and four hours of school work. During the summer the school is not in session and the boys spend all their time in the shop.

The shop work is so arranged that the apprentice, during his four years, is given an opportunity in each of the following departments: Drill press, milling machine, lathe, turret lathe, tool room, planing, assembling and erecting, fitting, collet and jobbing. A few are given work in the grinding and gear cutting departments. The time in each place varies from three months to a year. The instrument department is not regularly used for the training of apprentices but some of the more accurate and capable boys are given a chance there. The boy who takes a particular interest in drafting is sent to the drawing room for a time. Instruction in each department is given by the foreman. No regular order of departments is observed, but the boy is given as wide a variety of work in each department as his ability at the time will permit.

### **A Better Workman and a Better Citizen**

The Apprentice School attempts to supplement this training in the shop with instruction in the knowledge needed by a machinist. The course, however, is not limited to the bare needs of the trade, but is designed also to furnish a foundation for more responsible positions. By means of the school it is hoped to give the boy a broader outlook upon life and to fit him to become, not only a better workman, but a better citizen.

Since it is not advisable to hold classes during the summer months, the work naturally divides into four years. A year's work consists of two two-hour periods of thirty-five weeks. Two subjects are taught to each class at a time. The main subject for a year is studied for the entire thirty-five weeks. Other subjects last one term or half a year.

Although it is not required that each beginner shall have completed the ordinary common schools, a review of arithmetic is found to be necessary. One term of the first year is taken for this review. Problem sheets have been prepared to enable the boy to apply his knowledge to the things about him in the shop. English is studied during the second term. One hour at each session for the entire year is devoted to Mechanical Drawing. The boy works from models, blue prints and actual machine parts. Instruction is personal and direct. Each boy is left largely to his own resources and is allowed to advance just as rapidly as he can. Tracing, blue printing, and freehand sketching are included in this course.

#### **Courses in Detail**

The course in English is continued through the first term of the second year. After the fundamental principles of grammar have been learned, an opportunity is given for the application of those principles to letter writing and composition work and in short talks before the other members of the class. Algebra occupies the entire second year. The whole subject as found in the ordinary High School text-book is taught. A course in shop practice is given during the second term. This course considers the construction of machine tools, the proper use of measuring instruments, and the correct processes in modern machine-shop practice; in general, the "why" of the things the boy is doing in the shop. Emphasis is placed upon the advantage and necessity of a careful plan or schedule of operations for doing a particular job. The cutting properties of various tools and the proper speeds and feeds are studied. A text-book is used.

In the third year Geometry, Physics, and Trigonometry are taught. The time allotted will not permit the whole of Geometry to be covered, but enough of the essentials are presented to give a working knowledge of that subject. Plane Trigonometry is taught in its entirety. Some little practice in the use of surveying instruments is included in this course. Physics is given throughout the entire year. A standard High School text-book is used. The facilities at hand will not permit elaborate experiments to be undertaken, but many simple ones are performed.

### **To Broaden the Employee's Viewpoint**

The course for the fourth year is still in the process of development. Materials, Mechanics and Industrial History are to be taught and for the first time to a class which has had the advantage of all the work covered in the other three years. Materials treats of the manufacture, structure, and treatment of the materials familiar to a machinist. The manufacture of iron and steel is followed from the mine to the finished product. The microscope is used to show the structure of different steels and the effects of various treatments. Brass, aluminum and the bronzes are studied in the same way. This course is taught by a man in the company—a former apprentice—who has specialized in this subject. The course in Industrial History aims to give the boy a broader viewpoint and to explain the importance of the industrial development of the country in its relation to the other interests of life. Mechanics is taught throughout the year and includes not only what is commonly termed Mechanics, but elementary work in Strength of Materials and Machine Design. The latter part of this course can be adapted to the needs of the particular class.

Through the co-operation of the foremen and department heads, short talks are given once every two weeks before all the boys. These talks enable the foremen to present their point of view and to explain the details of their work in a way not possible in the shop. They have proved very helpful. A club for the apprentice, meeting once a month, offers social and athletic privilege as well as an opportunity for them to gain valuable experience in working together. Some topic of interest is discussed at each meeting.

### **Advancing to Positions of Responsibility**

It is for the future to say what results are to come from the Apprentice School. Records of the past justify high expectations. Of those who had some of the advantages of the school before completing their apprenticeship, two are assistant foremen, three are draftsmen, five are inspectors, and four are foremen. Consequently it is hoped as the sixty boys now in the shop complete their training, that our organization may be still further strengthened and the boys themselves so developed as to give them increased earning power and to open up new avenues of interest in their lives.

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On the diffusion of education among the people rests the preservation and perpetuation of our free institutions.—Webster.

## **CARNEGIE INSTITUTE TO TRAIN SALESMEN**

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### **Life Underwriters Announce New Department Will Teach Insurance Selling and Other Lines**

The Carnegie Institute of Technology will establish a course in salesmanship. A thorough investigation of the requirements of the course would first be made by a staff of eminent psychologists, leading sales agents, and research investigators. The work of this staff in preparing a course, which is expected to be far superior to any similar course now being given, may not be completed for a year or more.

William Alexander, Secretary of the Equitable Life Assurance Society, urged the institute two years ago to establish such a course, and since that time it has had the matter under advisement. In view of the fact that the insurance men have often repeated their desire for a school for properly training insurance agents, special attention will be given from the start to training in selling life insurance. Salesmanship in all lines of business will be taught.

The selling end of perhaps the most systematic business in the world is admittedly the most unsystematic and inefficient.

### **Expense of Training Agents**

While the cost of almost every other item is closely figured, it would be interesting, as well as surprising, to know how many companies really know what it costs to educate a permanent agent, and therefore the loss from those who fail is probably \$700 per agent upward. An official of perhaps the largest American corporation of international dealings, selecting his representatives almost entirely from college graduates, stated that before a representative was profitable to them he represented an investment of \$2,000.

Discussing the need for such a school Mr. Woods said:

"A head of a very large fire insurance company, whose agents are generally what might be called 'part time,' as they represent other fire companies, stated that his agency force was worth \$125 per agent. The head of one of the most efficient sales concerns in Detroit told me he valued his agency force of 575 agents, nearly all commission agents, at \$250,000, the cost of replacing them, and that they are conducting a course for each new addition to their force that will cost \$170 each. It can easily be calculated that a general agent could afford to pay \$1,000 down for an agent who was absolutely certain to produce



a minimum of \$100,000 of business a year, not a very high amount. It probably costs any successful general agent at least this in time and money, spent mostly in failures, to produce a permanent agent of this type.

"Is it not remarkable that up to the present time no established educational institution of the first rank has attempted to determine either what qualities are essential for a successful salesman, or what are the best methods for training him? There are more than 1,000,000 salesmen in the United States, besides which almost every person worth anything is directly or indirectly interested in salesmanship. There are more life insurance agents in this country than there are doctors or lawyers. Yet there are 500 medical schools and 114 law schools, and not one institution of recognized prominence to teach life insurance salesmanship, or any kind of salesmanship.

#### **Sales Agents or Directors**

"Perhaps no institution in the United States is better qualified to take up this work, first, of investigation, and second, of training, than the Carnegie Institute of Technology, to which Mr. Carnegie has munificently given \$12,000,000. It proposes to have as directors of this special branch the leading sales agents of the greatest corporations in this country, and to obtain for its scientific staff the ablest and most practical psychological and research investigators."

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#### **HELPING THE GRADUATE TO FIND HIMSELF**

An employment bureau for public school graduates is recommended in the annual report of J. M. Saunders, principal of the O street vocational school of Washington. Mr. Saunders would have the bureau composed of school officials and business men.

"The average student, when he graduates from school, seems unable to find himself, as it were," the report says. "Among the several reasons for this is the fact that, during his entire school career, he has depended upon the school for aid, for advice, for suggestions, and for real advancement. When he graduates he looks back with meekness and longing for the support which he has been getting, but which his graduation cuts off."

Mr. Saunders would have the bureau make a study of employment conditions and submit to school officials a report of their investigation.

## **CONNECTICUT STATE TRADE SHOPS**

### **Visitors From Other States Take Bridgeport Institution as a Criterion**

That the State Trade Education shop in this city is known beyond the borders of the Nutmeg State, says the *Bridgeport Telegram*, is proved by the fact that quite frequently committees from other States who are thinking of establishing similar institutions are sent to this city to learn about the work as it is done in one of the best trade education shops of the country.

Recently the visit of a commissioner of education from New Jersey proved that the Trade Education shop is better known outside the city of Bridgeport than it is in its home city.

The New Jersey man was particularly interested in the carpentry section of the school and was taken to a dwelling which the boys of the school are constructing and which is nearly finished. He was also shown through the school and expressed himself as surprised at the excellence of the plant, its equipment and the work which is being done there.

### **Other States Interested**

Representatives of the Indiana and Pennsylvania State Boards of Education have recently visited the school in this city and they state that it is recognized as one of the best in the entire country.

In the local Trade Education shop fifteen branches of industry are taught as follows:

Cabinetmaking, house framing, machine shop, shop mechanics, blueprint reading, machine design, plumbing, steam engineering (for stationary engineers and firemen), carpentry, patternmaking, toolmaking, shop mathematics, mechanical drafting, architectural drafting and printing.

### **Capable Instructors**

The instructors are the most capable men that can be secured for this work and the boys and young men who take advantage of the opportunities offered by the State are reaping large benefits.

In the Girls' School, located at 45 Washington street, six branches are taught. They are:

Plain sewing, tailoring, costume design, dressmaking, fancy sewing and millinery.

### **Results Satisfactory**

In both branches of the Trade Education shop the results thus far obtained have proved the wisdom of establishing the institutions; both are growing rapidly and the day and night classes are largely attended by young men and women who wish to make the most of the advantages offered and advance themselves in the various trades they have decided to take up.

James J. Johnson is the superintendent in charge of the shops and it is due to his untiring efforts and the valuable assistance he has been given by those associated with him in the work that the State Trade Education shops in Bridgeport have been recognized as a criterion by other States of the union.

The work of the schools is divided among the following departments:

Regular day department, continuation department, half-time department, co-operative department, vacation department, evening department and special department.

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### **INDIAN YOUTHS SET RECORDS IN FACTORY**

Out of the score of nations represented in an automobile factory in Detroit it remained for an Indian, Joseph Gillman, a Chippewa, whose home is in Minnesota and who is at present enrolled at the Carlisle Indian School, to set the world's record for assembling a car of that make. He had the machine ready for the road in two hours and fifty minutes after beginning work. The previous record was three hours.

This is the first of the results of a new system of vocational training introduced by the officials of the Carlisle Indian School, who plan to place students in the leading industries of every kind in the country as an enlargement of the school and a means of training the original Americans to become better citizens.

Twenty-five boys are now in the Detroit automobile plant, one is with another motorcar factory in the same city on trial, and four others are with one of the leading manufacturers of electrical appliances in New York.

While separated from the school life the boys are still under the training direction of the school, and remain so until they have completed a certain number of years of study and work, when they receive diplomas.

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### **EDUCATIONAL BULLETINS**

"Public, Society, and School Libraries," is a special report for 1913 which undertakes to present the statistics of libraries

having 5,000 volumes and over. The report is made up almost entirely of statistical tables.

"The University and the Municipality" is a compilation of the papers, addresses, and informal discussions of the first meeting of the National Association of Municipal Universities.

"The Training of Elementary School Teachers in Mathematics in the Countries Represented in the International Commission on the Teaching of Mathematics" offers data of a comparative study and is interesting for those engaged in the training of teachers in this country, if only because it indicates that the standards elsewhere are as chaotic as they are here.

"School Administration in the Smaller Cities" has been prepared to comply with requests from chairmen of school boards of small cities for definite information as to the duties and responsibilities of school boards of small cities and towns, their methods of work, and such other matters as would be helpful to such boards in the successful performance of their important duties.

An *Educational Directory, 1915-1916*, has been published by the United States Bureau of Education.

Copies of these publications may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C.

The July, 1915, Semi-Annual Report of the New York City Department of Education, Division of Research, devotes much attention to Vocational Instruction and Vocational Guidance. Copies of this report will be sent by the Department of Education upon request.

"Industrial Education" is the report of the Committee on Industrial Education at the Twelfth Annual Convention of the National Association of Manufacturers. The report has been reprinted for distribution by the Bureau of Education, Washington, D. C., where copies may be obtained.

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### **STOCKYARD'S TRADE SCHOOL A SUCCESS**

A saving of nearly five years in the economic life of girls from the stockyards district in Chicago has been effected by the trade school of the University of Chicago Settlement, according to workers in the school. In this, its third year of management by the Sigma Alumnae Association, the capacity of the school has been enlarged from fourteen to thirty-five, but already this year the waiting list holds sixteen names.

Girls of fourteen or over are entered in the classes for a course of five months in trade sewing, and at the end of that time positions are found for them in the large dressmaking establishments of the city. Here with the newly acquired technical education, the novice is able to earn \$6 a week at the start and to increase her income gradually as she becomes more proficient. The untrained girl has hitherto had no opportunity in sewing save to go into a factory, at a weekly wage of \$2 or \$3, with chance for advancement so small that it is usually five years before the cleverest earns the minimum given to the trade school graduate.

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### **FOR ENGINEERING LABORATORY**

*(Jamestown, N. Y., Post)*

Universities are training men in the professions and engineering sciences. There is a demand for vocational training in the public school. There is a widespread demand that education shall be more utilitarian, the cultural side taking secondary place. The idea is being developed still further by a plan suggested by Frederick A. Goetze, dean of the Graduate Engineering School of Columbia University. Mr. Goetze would provide a great industrial engineering laboratory for research work, having the same relation to the industries of this country as similar ones in Germany have to its great manufacturing interests.

The first step would be the erection of a building, costing about \$500,000, where tidewater and railroad facilities could be had within a few minutes' walk of the university. The plant could be extended as the money and the demand for better facilities increased. The reasons given for the establishment of an industrial laboratory are that it would lead to greater production and build up the industries of the country. He accounts for the extraordinary strides which Germany has made in the commerce of the world to the fact that the efforts of the German universities and the industrial interests have been united for that purpose.

The great benefit to industry would be found in the opportunity for engineers to turn to the great laboratories for solution of problems which are beyond the scope of the individual manufacturer's equipment or the capabilities of his forces. When such a laboratory has once been established, with the staffs of associated technical schools available for consultation and advice, manufacturers would be inclined to establish scholarships and avail themselves of the exceptional facilities for solving the problems which arise in their business.



## **FINDS ILLS IN SCHOOL SYSTEM**

### **Educators' Committee Seeks to Meet the Needs of Child in High School But Not Going to College**

High school work will be reorganized in the United States if the work of the reviewing committee of the commission on reorganization of secondary education is to be of any value.

Those participating in the discussions are Charles Hughes Johnston, professor of Secondary Education at the University of Illinois; Henry Neumann, professor of Ethical Culture, New York City; William Owen, president of Chicago Normal College; Edward O. Sisson, commissioner of education of Boise, Idaho; Joseph S. Stewart, professor of Secondary Education, University of Georgia; Milo H. Stewart, principal of the Manual Training High School, Indianapolis, Ind.; H. L. Terry, High School Inspector, Madison, Wis.; James Fleming Hosac, Chicago Normal College; Thomas Jesse Jones, Bureau of Education, Washington, D. C.; William Orr, Deputy Commissioner of Education of Boston; Walter Eugene Foster, Stuyvesant High School, New York City; William B. Snow, Boston, and A. V. Storm, of the University of Minnesota.

### **Consider Needs of Child**

"We are out to give the child what the child needs," said Clarence D. Kingsley, chairman of the committee, recently. "The high school of to-day does not fill the bill. There is too much sameness to it. It is a survival of the idea that every child ultimately would go to college.

"We know now that every child will not ultimately go to college and we are pretty certain that every child will not be able to assimilate the present high school pabulum. What we are after is to give the child what the child needs in after life.

### **For Vocational Work**

"So what we have been trying to do is to arrange a system of high school instruction that shall include two grades of high school, the junior and senior. In the first we hope the child will be able to decide what activity it hopes to follow in later life and in the second we want to give the child as much instruction in that particular direction as our resources will permit."

The report of the committee meeting in Chicago will be made at the convention of the National Education Association to be held in Detroit in February.

## **YOUNG AND OLD USE GARY SCHOOL**

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**Even Run on Saturday, Although Nobody Needs to Come to  
Classes Unless They Wish to**

BY HENRY M. HYDE  
(*In Chicago Tribune*)

"One out of every three people in town goes to the public schools."

That is the boast of the city of Gary, Ind. In Gary the schools run practically day and night. They run on Saturday, too. Nobody needs to come on Saturday, but the attendance is almost as large as on the "regular school days," which is proof that these are a new kind of schools. And on Sunday there are popular lectures in the school auditoriums.

There are more than 5,000 kids in the day school. To the night schools come more than 6,000 adults. A good many children come back with their parents after supper and play about the wide halls while father and mother are studying and reciting.

There is no overcrowding in the Gary schools. Such a thing as half day sessions are unknown there. Without building any more schoolhouses or buying any more desks and benches, the Gary schools could take care of a good many more pupils. And they only supply desks and seats for about a quarter of the 5,000 children at that.

### **In Chicago Always Crowded**

Now in Chicago the public schools are always overcrowded. There are five or six thousand children who only get half a day's schooling. Some 15,000 more occupy little movable coops called "portables," because there is not room for them in the regular buildings.

Yet the Chicago public schools have more than 300,000 desks and seats, which is within fifteen or twenty thousand of the number of children enrolled.

Why do the Gary schools have plenty of room and to spare, while the Chicago schools are increasingly overcrowded? And what would be the condition if one-third of all the people in Chicago went to school, as they do in Gary?

Chicago is about to select a new superintendent for its public school system, which most people will admit is vastly the most important public activity in the city. Perhaps he may find in the Gary schools the solution for the problem of overcrowding,

as well as many other new ideas and suggestions. He need not be timid about it, for William Wirt, principal of the Gary schools and their creator, is now showing New York City how to make over some of its public schools on the Gary model.

### **Continuous Process**

In the Gary schools education is what manufacturers call a continuous process. While one-quarter of the children are occupying all the desks at study the rest are scattered in shops and playgrounds, studios and auditorium, working at the forge or in the laboratory, drawing, or playing outside. The various groups of pupils pass from one activity to another. Each day every child has the opportunity of the varied facilities which the whole big plant offers. Every department of the school is busy all the time. In that way Mr. Wirt can accommodate twice as many children in each schoolhouse as under the old and cast iron rule under which most public schools are conducted—"a desk and a seat for every child."

But that is not the only strange thing about the public schools of Gary. They are revolutionary in almost every way. Old fashioned school principals are likely to be horrified by what they see there.

### **Classes Turned Into Societies**

What, for instance, would be thought of a class in ancient history which has organized itself into a voluntary society, the regular recitations being called to order and conducted by the president, while the instructor keeps quietly in the background and often lingers outside the room. But one's horrified astonishment may be tempered by reading the definition of the purpose of the class, written by the child who prepared the constitution of the society—"to improve its members as American citizens by a study of the experiences of the ancient peoples."

The public schools of Gary are part of the actual life and work of the community. The teacher of chemistry, for instance, is also the city chemist. And the children are his assistants in making the official chemical tests of city water and milk supply, and pure food investigations. With the inspector, they visit dairies, workshops, and bakeries. Last year one of the school printing shops published a milk bulletin containing reports of their tests and general information.

### **Equip Own Buildings**

The boys and girls in the Gary schools actually make most of the furniture and equipment needed for the buildings. Reg-

ular mechanics are employed to look after and direct the regular work of repairs and maintenance. Their shops are the manual training rooms, and the children take part there, as everywhere else, in actual constructive and useful work. No one is quicker than a child to realize the fundamental difference between real work and useless "experiments."

The shops are scattered all over the buildings, so that there is no sense of distinction between shops and recitation rooms or studios. All the shops have glass doors, and the children going about the halls stop and look as they are attracted by what is going on inside. In this way an unconscious form of vocational guidance is exercised, and the boy who "is naturally crazy about electricity" soon finds just what his soul desires.

### **Co-operates in Education**

Mr. Wirt does not believe in keeping the public schools apart and separate from the other educational activities of the town. If the church offers religious training, the children may have time for it out of their auditorium and play hours. Young Men's Christian Association classes, settlement house classes, special music teachers, etc., all have the same opportunity. Already a Polish parochial school in Gary has found it no longer necessary to keep its doors open.

The equipment of the Gary schools is varied and rich beyond that of any other public school buildings in the country. There are playgrounds, gymnasias, swimming pools, gardens, science laboratories, workshops, conservatories and libraries. All this looks tremendously expensive, and the thrifty taxpayer shudders at the prospect.

The fact is that the tax rate in Gary is the lowest in the county, and the per capita cost of instruction in the public schools of Gary less than that in Chicago.

The continuous use of all the facilities of each school makes it possible to accommodate at least twice as many children as the ordinary school. Only half as many buildings are needed, and part of the money saved in this way will pay for all the additional equipment.

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### **VOCATIONAL TRAINING**

*(Bridgeport, Conn., Telegram)*

Nobody who is watching closely the trend of educational affairs in America can doubt that vocational training is growing to play a more and more important part in the public school cur-

riculum. Bridgeport, as one of the leading industrial cities of the nation, should not be slow in taking up the teaching of vocations. It is not enough that we have the State Trade School in the city (an institution already overtaxed and in pressing need of enlargement) but the work of teaching trades should be supplemented in the public schools.

Nobody would suggest that all academic education be dropped, and trades substituted—that in place of teaching a young man to read and write, we make him a plumber, or a young woman a seamstress. So far as the grades are concerned, there is little need of change save in the improvement of their own particular work. Our demand is not for less of the A, B, C's in the grades, but for more thorough teaching of the fundamentals. But when pupils reach the high school period they should at least have an option. A boy who plans for higher education and hopes to enter one of the professions after a college career should not be forced to study plumbing while in high school, but conversely a youth who expects to be a plumber should not be required to waste his time on Cicero. There is no reason why every recognized trade should not be raised to some of the dignity which now accrues to the professions. Vocational training is all that has wrought the difference for the professions, so-called, and vocational training can do as much for the trade, so-called. If our plumbers, carpenters, masons and machinists were as carefully trained as our lawyers, doctors and clergymen, the old distinction between "trade" and "profession" would disappear, as it should. Nobody thought very much of surgeons when their profession was limited to the practice of itinerant barbers. Nobody thought much of the dentists when they traveled from place to place like umbrella menders, taking care not to retrace their steps so as to escape the just wrath of their victims. In fact it was America that first placed dentistry on the plane of a profession by means of vocational training, and American dental practice in consequence leads the world. When we have made such advances in some lines of the nation's actual work, why so neglect others?

Bridgeport, in addition to its present new high school, needs a manual training high school for the purpose of teaching young men and women how to make professions out of trades. This work will not conflict with that of the trade school, whose usefulness consists largely in helping to train those already at work.



### **ARMY SCHOOL FOR SCOUT CHAUFFEURS**

Announcement has been made that a school for training soldiers to be chauffeurs of auto scout cars has been started in New York. Soldiers from Forts Jay, Wadsworth, Totten, Hamilton, Wood and Schuyler will study the intricacies of the automobile engine.

The new school was inaugurated under the direction of Capt. Gordon Johnston, aide-de-camp to General Wood. Because it would be impossible to open separate schools at each of the posts, with an equipment of cars and machinery, arrangements have been made with the automobile school of the West Side Branch of the Young Men's Christian Association, New York, to take the men and teach them to run and repair the automobile.

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Education is the only interest worthy the deep, controlling anxiety of the thoughtful man.—Phillips.

### **GENERAL EDUCATIONAL NOTES**

Trenton, New Jersey, anticipated the recommendation of Assistant Commissioner of Education Carris that continuation schools be organized throughout the State to take care of the fourteen-year-old girls and boys who leave school to go to work. It has provided for them in its evening schools, which this year will be open four nights each week from October until April, and in which are taught all of the subjects that are taught in the day schools, including manual training.

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Continuation classes to meet the requirements of the Child Labor Law which became effective on January 1, have been organized by several large department stores and other concerns of Philadelphia, a number of whose employes will be affected by the law. Dr. John P. Garber, Superintendent of Public Schools, who made the announcement, said that nine concerns employing approximately 1,300 children between the ages of fourteen and sixteen had informed him they had arranged to maintain and pay for the schools in their own establishments and would conform with any curriculum laid down by the Board of Education.

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Seniors in the high school at Knoxville, Tenn., are to gain some first-hand knowledge concerning vocational work. Under the direction of the English department a systematic survey of the occupations and industries of the city is to form a part of the curriculum of the high school. The survey will cover condition of workers, maximum and minimum wages, chances for promotion, and any other information that will serve to throw light on the character of the specific vocation. A study of the social, civic and economic conditions of the city will be made. This work

will include also a course of reading bearing on the various vocations, the information thus obtained to be the basis for composition work in the English classes. The knowledge gained by the actual survey work and the prescribed reading will be supplemented by talks to the entire school by men and women of the city on some of the typical vocations.

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The board of managers for the State Vocational School for Girls of Tennessee will consider Cleveland and the 100-acre site which has been tendered the State as a location for the proposed school. In addition to the land which has been offered, a large sum of money, an automobile, cows, chickens, etc., have been pledged and tendered the board as an extra inducement to locate the school in Cleveland. The proprietor of a large manufacturing plant announces he will furnish profitable employment to every girl discharged from the school after it is in operation. It is understood Nashville is also making a determined effort to have the school located there on the State property—Herbert domain.

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As a result of an investment of \$100 in cotton when it was down to seven cents last year, the Rev. Stephen D. Cremean, pastor of Mount Vernon Southern Methodist Church, in Atlanta, Georgia, has \$30,000. Dr. Cremean borrowed all he could on his \$100 purchase, bought more and kept on "pyramiding" as heavily as he could until he held \$30,000 worth of the staple. He is disposing of his holdings now and purposes to put the money into a trade school for poor children. "I have always wanted to give poor children a chance by teaching them a trade," he said, "and now I am able to do it."

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Teaching the boy a trade so efficiently that when he has finished his course he knows there is a position awaiting him—this eminently practical training is gaining popularity for the Philadelphia Trades Schools. Although the schools have been enlarged, there still are waiting lists. While pupils begin at the school at Twelfth and Locust streets, it is at the school at Seventeenth and Wood streets that finishing touches are put on. As an indication of how the pupils of this school are in demand, the Bell Telephone Company recently asked the principal, Charles F. Bauder, for several more of its graduates. These will enter the engineering department of the company as soon as they receive their diplomas in January.

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Classes of domestic science, manual training and agriculture have been started in the rural schools of Nicholas County, Kentucky, with much success.

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A new development of the correspondence course at the Massachusetts Agricultural College is the organization of classes in different towns under the personal supervision of an instructor on the staff of the extension service. The same courses and subjects are taken up that are used in the regular course that is

given by mail. The regular course is individual and does not deal with groups of students. The different courses are sent by mail, studied and the answers sent back, to be graded and filed at the college. Under the new system, the people come in direct contact with some instructor from the college. The first of these courses was held at Beverly under the supervision of E. H. Forbush, and will continue once a week during the winter. Soil fertility was studied. Another class was formed at Townsend Harbor, and a course in poultry will be given in Pittsfield. Two classes in home economics under the supervision of Laura Comstock will be given in Gardner and Assonet.

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The best vocational training offered by any school system in the United States is to be provided for the students of the United States Indian School. A committee has been conferring with Commissioner Sells on the matter. The new course is divided into three divisions, the beginning stage, the finding stage and the finishing stage. During the first and second periods the training in domestic and industrial activities centers around the conditions essential to the improvement and proper maintenance of the home and farm. The course outlined in the pre-vocational division is unique in the fact that in addition to the regular academic subjects, boys are required to take practical courses in farming, gardening, dairying, farm carpentry, farm blacksmithing, farm masonry, farm painting and shoe and harness repairing, and the girls are required to take courses in home cooking, sewing, laundering, poultry raising and kitchen gardening.

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Plans are well under way to organize a comprehensive industrial survey in New York City for the purpose of determining definitely what type of industrial education should be provided by the public schools to meet the community's needs.

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The Southern Industrial Association supervises the teaching of manual training to the children of mountaineers. Miss Margaret Wilson, daughter of President Wilson, is the national president of the association. In a recent report the members were given a good insight into the work being done. The Philadelphia branch since its organization, two years ago, has grown from a handful of members to a membership of 200, all engaged in giving aid for the uplift of the Southern mountaineers.

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Vocational training centers, newest educational venture in Scranton, Pennsylvania, were opened recently. There are two rooms; in one domestic science is taught to the girls, and in the other the boys receive instruction in wood-working and kindred arts. The two rooms will care for the seventh and eighth grade pupils of ten schools. Each school will have the use of the rooms half a day each week. If the plan is successful, three other manual training centers will be opened in various sections of the city. The four will then be able to give this training to all the seventh and eighth grade pupils of the city.

A highly important opinion affecting the operation of the continuation schools under the new Child Labor law of Pennsylvania has been handed down by Attorney-General Francis Shunk Brown. It was to the effect that minors coming under the act must attend school the number of hours specified by law, but may be permitted to work one week and devote the next week to school, alternating in that manner.

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"The honors that come to the Springfield, Massachusetts, vocational school also consist of satisfied employers," says the *Springfield Republican*. One of the boys who graduated two years ago reported a day or two ago that he is now receiving 45 cents an hour, and this is duplicated in other reports. The vocational school, in conjunction with other institutions of like nature in the State, carried off first honors with their exhibit at the Panama-Pacific Exposition. Principal Egbert E. MacNary was offered the State agency for industrial education in Massachusetts last year and refused it. He is now engaged in the Boston investigation with Superintendent Van Sickle. He has written several magazine articles on vocational subjects, and is an authority. Edwin C. Knapp, a member of the teaching force, resigned to instal a woodworking department in the Holyoke schools, and Daniel Shea is installing a similar department in the High School of Commerce.

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A dispatch from Mexico says: "It can safely be said that the people are tired of the revolution and are only waiting an opportunity to return to their normal business. One thing the people ask is education—more schools and better teachers. This desire has appeared even in the addresses of welcome to Carranza during his tour. It can be said that Carranza is sincere in his desire to give more and better education, as his talks with the Governors of the various States demonstrated. It has been suggested that a number of American teachers be brought into Mexico, where they could implant modified American methods."

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Rabbi Leon Harrison, of Temple Israel, in an address before the St. Louis Advertising Club, gave the names of six books, the reading of which, he said, would make any one an educated man. The books are Flammarion's "Wonders of the Heaven," Geikie's "Primer of Geology," Taylor's "Primitive Culture," Spencer's "Study of Sociology," Lecky's "History of European Morals," and Clarke's "The Ten Great Religions of the World." Rabbi Harrison said the books could be read in six months, if a half hour each night were devoted to them.

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A self-supporting domestic science and arts department, the only one known in the United States, is that of the Park City high school, at Knoxville, Tennessee. The idea was conceived and worked out by Superintendent J. R. Lowry. It involves no tuition fee or imposition upon the pupils. Visitors say that it surpasses even that of the University of Tennessee. The large lunch room is also a feature. Children come to the lunch room in

groups and eat at the counter. A good nourishing menu is served at reasonable prices. The menu is changed daily. The pupils are also permitted to enjoy quaint folk dances in the large lunch room. A graphonola furnishes music for the dances and adds to the pleasantness of the meal.

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In order to have the coming generation of Jacksonville, Florida, boosters, the public schools will introduce the Industrial Survey of Jacksonville into the class rooms, supplying every teacher so she may tell her pupils all the facts regarding their city and thereby acquaint them with valuable historical knowledge and at the same time equip them to talk intelligently of the city's advantages.

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A workroom at Chase House Settlement, Chicago, where unemployed went to sew for \$1 a day, has developed into a trade school for girls. This school is turning out young dressmakers at a remarkable rate now. The garments are on sale at the Settlement. The girls make a complete apron for 35 cents and a child's dress for a dollar. After twelve weeks the young girls go right into dressmaking parlors, earning from \$5 to \$8 a week.

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Educational conditions in India are changing with notable rapidity. In the last five years the number of girls in school has increased nearly one-half and the expenditure on institutions for them has just doubled. The record for the last year was the most remarkable. In the last fifteen years there has been an enormous increase in schools, number, equipment and attendance, all along the line. Before that time there were only four and a half million pupils in a population which exceeded 300,000,000. There are now nearly seven million. The primary schools having increased 30 per cent, the secondary school 40 per cent, and the colleges more than 100 per cent.

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That the course of study offered in the Francis T. Nicholls Industrial School for Girls is recognized as a high standard by the New Orleans business houses, is shown by the fact that the school announces it is in a position to offer all graduates places at a minimum salary of \$7 weekly, with ample opportunity for advancement.

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A study of Washington's public school system was made by eighty-one principals and teachers of Mexican schools. These teachers also have studied the school systems of Boston and other large cities of the United States. A hopeful sign for Mexico.

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As a site for a school in which girls will be taught preparedness, sewing and knitting, bandage making, plain and economical cooking, diet study for the sick and convalescent and other subjects which might make them of value should this country be plunged into war, Senator Francis G. Newlands, of Nevada, has donated the use of ten acres of land in Chevy Chase, just outside



of Washington, to the women's section of the Navy League. In addition the site would be used as an instruction camp for women attending the annual convention of the section next May who are willing to act as teachers at other camps in various parts of the country.

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The old Genesee School building at Syracuse, N. Y., which has been vacated for the new one, has been converted into a wood working shop for the Technical High School and a class of 100 boys is now doing cabinet work there.

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The establishment of a vocational guidance bureau as a part of the educational work of the Chicago schools is urged on the Board of Education by the Chicago Association of Commerce in approving a report from its committee on education. The association for some time has conducted its own vocational guidance bureau. An advisory council in addition to a bureau of ten employees is recommended. This council would be composed of representative school principals and teachers, employers, employees and social workers to co-operate with the bureau. "A public school system which does not endeavor to direct children who are about to leave school must be regarded as incomplete," says the report.

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At a conference attended by representatives of various industrial and educational organizations, the possibilities of industrial education in Delaware were discussed. The conference marked the beginning of a proposed survey of the educational and industrial conditions of the State.

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Certain experiments in school management, conducted during the present year in the day elementary schools of New York, have resulted successfully. There has been marked improvement in several of the schools as a result of the introduction of industrial work. Not only has there been an appreciable decrease in truancy, due to this innovation, but there has also been improvement in academic standard and conduct. In its report to the Board of Education, the local school board states that "in Public School 95 industrial work has been introduced, and the school now has a plumbing shop, a printing shop, a sheet metal shop, electric wiring, trade drawing, and clay modelling classes; in Public School 38 industrial work for girls has been introduced, and the principal reports that the girls in the industrial classes have held their own in all tests with the girls doing regular work, that there has been a great improvement in their appearance, behavior, and manners, and that articles amounting in value to over \$700 have been made by them.

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From an article written by A. D. Weeks, head of the Department of Education of the Agricultural College of North Dakota, the following information is taken: Attendance in institutions of higher education increased 239 per cent in the thirteen-year

period ending 1913, an increase nine times as great as that in population. For the past twenty-five years high school enrollment has increased three times as fast as population, and there is the prospect of a high school in every village, consolidated country district, and township.

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Calvin Kendall, State Commissioner of Education, of New Jersey, speaking before the State Teachers' Association, dwelt upon the increased interest throughout that State in education, declaring there are now 550,000 children enrolled in the various public schools for whose instruction the State was annually paying out twenty millions. The high schools now have 40,000 students, while the kindergartens are instructing 4,000. The vocational schools are growing in popularity all over the State, according to Dr. Kendall, who announced that this year's enrollment was 6,000.

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"Among the most difficult problems that educators of this country now are working on," says the *New York Press*, "is that of rural schools. In cities vocational education has been emphasized, and so much has been printed on the subject that the fact is liable to be overlooked that in rural districts the problem of affording children an elementary academic education has not yet been solved."

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New York University announces that a course will be given, beginning in February, for the training of teachers of department store classes.

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Professional or vocational study claims the interest of more than one-fourth the women students at the University of Wisconsin this year. Of the 1,557 women enrolled in the university only 975 are pursuing purely academic studies. Home economics leads, with 260 women enrolled in that course.

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Mrs. Russell Sage has concluded to found a branch of the Emma Willard School in Troy, N. Y., to teach domestic and industrial art. It is to be established upon the site of the former Troy Female Seminary, which she attended as a pupil, and is to be known as the Russell Sage School of Practical Art. For its sustenance Mrs. Sage has appropriated \$250,000. The school is intended for young women who will receive instruction in arts similar to those taught at the Pratt Institute in Brooklyn and Simmons College of Boston. The buildings formerly used by the Emma Willard School will be occupied, Mrs. Sage's munificence having recently made possible the erection of new Emma Willard School buildings.

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Remember that to change thy mind and to follow him that sets thee right is to be none the less the free agent that thou wast before.—Marcus Aurelius.

# Committees of The National Association of Corporation Schools 1915-16

## Trade Apprenticeship Schools

Mr. J. W. L. Hale, *Chairman*,  
Massachusetts Board of Education,  
Boston, Mass.  
W. L. Chandler,  
Dodge Manufacturing Co.,  
Mishawaka, Indiana.  
J. M. Larkin,  
Fore River Shipbuilding Corporation,  
Quincy, Mass.  
F. W. Thomas,  
Atchison, Topeka & Santa Fe Railway,  
Topeka, Kansas.  
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